City of Indianapolis DPW Department of Public Works
Bart Peterson, Mayor

TO: Interested Parties / Applicant

RE: International Truck and Engine Corporation / 097-22420-00039

FROM: Felicia A. Robinson
Administrator

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within fifteen (15) calendar days of the receipt of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures

Department of Public Works
Office of Environmental Services
2700 Belmont Avenue
Indianapolis, IN 46221
317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw

November 3, 2006

City of Indianapolis
DPW
Department of Public Works
Bart Peterson, Mayor

Mr. Doug Fitzgerald
International Truck and Engine Corporation
5565 Brookville Road
Indianapolis, IN 46219

CERTIFIED MAIL: 7000 0600 0023 5186 5140

Re: Significant Source Modification 097-22420-00039
(superceding Significant Source Modification 097-18271-00039)

Dear Mr. Fitzgerald:

International Truck and Engine Corporation (ITEC) applied for a Part 70 operating permit on October 24, 1996 for the operation of a gray iron foundry and an engine testing and assembly line. A Minor Source Modification to add a new pouring and cooling line (EU-F18) and a new engine test cell (NGDI) was approved on April 26, 2001. A Significant Source Modification modifying the minor source modification was approved on October 8, 2004. On December 5, 2005, an application was received to modify the first significant source modification. International Truck and Engine Corporation is requesting that the permit be modified to include more restrictive emission limitations for emission unit EU-F18 line based on recent stack testing results.

Pursuant to 326 IAC 2-7-10.5 the approval conditions for the construction and operation of EU-F18 are revised as described in the revised Part 70 Source Modification enclosed. This Significant Source Modification 097-22420-00039 revises and supercedes the Significant Source Modification 097-18271-00039 issued on October 8, 2004.

The Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3).

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please call Anh-tuan Nguyen at (317) 327-2353.

Sincerely,

Original Signed by

Felicia A. Robinson
Administrator

Enclosure: Technical Support Document
Significant Source Modification

FAR/an

cc: File
U.S. EPA, Region V
Mindy Hahn - IDEM, OAQ
Matt Mosier - Compliance
Anh-tuan Nguyen - Permits
Marion County Health Department

Department of Public Works
Office of Environmental Services
2700 Belmont Avenue
Indianapolis, IN 46221
317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw

City of Indianapolis
DPW
Department of Public Works
Bart Peterson, Mayor

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES

PART 70 SIGNIFICANT SOURCE MODIFICATION

International Truck & Engine Corporation
5565 Brookville Road
Indianapolis, Indiana 46219

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: 097-22420-00039	
Issued by: Original Signed by Felicia A. Robinson Administrator Indianapolis Office of Environmental Services	Issuance Date: November 3, 2006

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and City of Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary source, which includes a gray iron foundry operation and engine testing and assembly operations.

Responsible Official:	Plant Manager, ITEC – Indianapolis Engine Plant and Plant Manager, Indianapolis Castings Corporation a wholly owned subsidiary of ITEC
Source Address:	5565 Brookville Road, Indianapolis, Indiana 46219
Mailing Address:	5565 Brookville Road, Indianapolis, Indiana 46219
General Source Phone Number:	(317) – 352-4790
SIC Code:	3519, 3321
County Location:	Marion
Source Location Status:	Nonattainment for ozone under the 8-hour standard Nonattainment for PM2.5 Attainment for all other criteria pollutants.
Source Status:	Part 70 Permit Program Major under PSD and Nonattainment NSR; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) M4 casting Line, identified as EU-F18, with a nominal operating capacity of 9 tons of iron poured per hour and 10.75 tons of sand per hour, with pouring emissions controlled by the Phase 5 baghouse, exhausting to stacks SV-23 a, b and c, mold cooling, rollout room and waste mold storage emissions controlled by Phase 12 baghouse and a regenerative thermal oxidizer, exhausting to stack SV-26, and constructed in 2004

(b) One (1) production audit dyno engine test area and one (1) engine test area referred to as startability, identified as emissions unit EU-E03D, constructed in 2001, with a maximum capacity of 250,000 engines per year, combusting diesel fuel oil consisting of three (3) diesel fuel-fired dyno engine test stands, each with a nominal fuel consumption rate of 4.3 lbs per six minute test cycle, with a maximum of thirty (30) tests performed per hour, and exhausting through stacks SV-E03D1 through SV-E03D6 and consisting of two (2) diesel fuel-fired engine test run stands, each with a nominal fuel consumption rate of 1.0 lbs per hour per stand, with a maximum of ninety-six (96) tests performed per hour, and exhausting through stack SV-E03D7 to SV-E03D10.

(c) One (1) M1 mold pouring operation, identified as emission unit EU-F08, constructed in 1957, with a maximum capacity of thirty (30) tons of metal poured per hour, with emissions uncontrolled, and exhausting through stacks SV-18A through SV-18C.

(d) One (1) M1 casting cooling (Fume Tunnel M1) operation, identified as emission unit EU-F09, constructed in 1957, with a maximum capacity of thirty (30) tons of metal poured per

hour, with emissions uncontrolled, and exhausting through stacks SV-19A through SV-19D.

(e) One (1) molding operation, identified as emission unit EU-F10, constructed in 1976, consisting of sand coolers (M1 and M3), casting pre-cooling, a storage hopper, and a sand muller (M1), with a maximum capacity of ninety (90) tons of castings per hour and a maximum sand throughput of one hundred fifty (150) tons per hour, with emissions controlled by the Phase III South baghouse and Phase 5 baghouse, and exhausting through stacks SV-20A through SV-20B and SV-23 a, b, and c respectively.
Note: Only the portions of EU-F10 that are related to the M-1 line are affected by this Significant Source Modification. Those portions are: the M-1 sand cooler, M-1 casting pre-cooling, and the M-1 sand muller.

(f) One (1) casting vibratory conveyor and casting cooling operation, identified as emission unit EU-F11, constructed in 1977, consisting of casting punchout, shakers, casting shakeout, and casting cooling, with a maximum capacity of thirty (30) tons of metal poured per hour with emissions controlled by the Phase IV baghouse, and exhausting through stacks SV-21A through SV021D.
Note: EU-F11 consists of casting punchout controlled associated with M-1 only. Shakers, casting shakeout, and casting cooling are utilized by both the M-1 line and the M-3 line.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

A.4 Significant Source Modification [326 IAC 2-7-10.5] [326 IAC 2-7-12]

This Significant Source Modification supercedes the Significant Source Modification 097-18271-00039 issued on October 8, 2004 which superceded the Minor Source Modification 097-12752-00039 issued on April 26, 2001.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, OES, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.4 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.5 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.6 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, and OES within a reasonable time, any information that IDEM, OAQ, and OES may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, and OES copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.7 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form or the form's equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.8 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, and OES upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and OES. IDEM, OAQ, and OES may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.9 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee OES within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 317-327-2234 (ask for OES, Air Compliance)
Facsimile Number: 317-327-2274.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indianapolis OES
Air Compliance
2700 South Belmont Avenue

Indianapolis, IN 46221

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, and OES may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify OES by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.10 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Permits
2700 South Belmont Avenue
Indianapolis, IN 46221

Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit(s) vented to the control equipment is (are) in operation.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Asbestos Section
2700 South Belmont Avenue
Indianapolis, IN 46221

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ, and OES of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, and OES not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, and OES if the Permittee submits to IDEM, OAQ, and OES a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality

100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)])]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control shall have a scale such that the expected maximum reading for the normal scale shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request the IDEM, OAQ, and OES to approve the an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records;

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, and OES within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ, and OES that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ, and OES may extend the retesting deadline.

(c) IDEM, OAQ, and OES reserve the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.14 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] {326 IAC 2-2] [326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or OES makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or OES within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, other than projects at a Clean Unit, which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee) and 326 IAC 2-3-1 (z)) may result in significant emissions increase and the Permittee elects to utilize the

"projected actual emissions" (as defined in 326 IAC 2-2-1 (rr) and 326 IAC 2-3-1 (mm))), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq) and 326 IAC 2-3-1 (ll)) at an existing emissions unit, document and maintain the following records:
  (A) A description of the project.
  (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
  (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
    (i) Baseline actual emissions;
    (ii) Projected actual emissions;
    (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and 326 IAC 2-3-1(mm)(2)(A)(iii); and
    (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.15 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Compliance
2700 South Belmont Ave.
Indianapolis, IN 46221

unless specifically stated otherwise in the D section.

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be

considered timely if received by IDEM, OAQ, and OES on or before the date it is due. For documents submitted to OES only and by any other means, they shall be considered timely if received by OES on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ and OES.

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).

(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Compliance
2700 South Belmont Ave.
Indianapolis, IN 46221

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for

review upon a request for inspection by IDEM, OAQ and OES. The general public may request this information from the IDEM, OAQ and OES under 326 IAC 17.1.

Stratospheric Ozone Protection

C.16 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) One (1) M4 casting line, identified as EU-F18, with a nominal operating capacity of 9 tons of iron poured per hour and 10.75 tons of sand per hour, with pouring emissions controlled by the Phase 5 baghouse, exhausting to stacks SV-23 a, b and c, mold cooling, rollout room and waste mold storage emissions controlled by Phase 12 baghouse and a regenerative thermal oxidizer, exhausting to stack SV-26, and constructed in 2004.

(c) One (1) M1 mold pouring operation, identified as emission unit EU-F08, constructed in 1957, with a maximum capacity of thirty (30) tons of metal poured per hour, with emissions uncontrolled, and exhausting through stacks SV-18A through SV-18C.

(d) One (1) M1 casting cooling (Fume Tunnel M1) operation, identified as emission unit EU-F09, constructed in 1957, with a maximum capacity of thirty (30) tons of metal poured per hour, with emissions uncontrolled, and exhausting through stacks SV-19A through SV-19D.

(e) One (1) molding operation, identified as emission unit EU-F10, constructed in 1976, consisting of sand coolers (M1 and M3), casting pre-cooling, a storage hopper, and a sand muller (M1), with a maximum capacity of ninety (90) tons of castings per hour and a maximum sand throughput of one hundred fifty (150) tons per hour, with emissions controlled by the Phase III South baghouse and Phase 5 baghouse, and exhausting through stacks SV-20A through SV-20B and stacks SV-23 a, b, and c respecitively.
Note: Only the portions of EU-F10 that are related to the M-1 line are affected by this Significant Source Modification. Those portions are: the M-1 sand cooler, M-1 casting pre-cooling, and the M-1 sand muller.

(f) One (1) casting vibratory conveyor and casting cooling operation, identified as emission unit EU-F11, constructed in 1977, consisting of casting punchout, shakers, casting shakeout, and casting cooling, with a maximum capacity of thirty (30) tons of metal poured per hour with emissions controlled by the Phase IV baghouse, and exhausting through stacks SV-21A through SV021D.
Note: EU-F11 consists of casting punchout controlled associated with M-1 only. Shakers, casting shakeout, and casting cooling are utilized by both the M-1 line and the M-3 line.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a)(Area Particulate Limitations), particulate matter (PM) emissions from the M4 casting line (EU-F18), the M1 mold pouring operation (EU-F08), and the M1 casting cooling operation (EU-F09), shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.1.2 Particulate Matter (PM) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following requirements:

(a) The PM emission rate from M4 casting line, identified as EU-F18, controlled by the Phase 5 and 12 baghouses, and a regenerative thermal oxidizer (RTO), shall not exceed 0.5 pounds per ton.

(b) Throughput shall not exceed 25,000 tons of metal poured on EU-F18 per twelve (12) consecutive month period.

Compliance with D.1.2 and D.2.2 shall limit the PM emissions from this modification to less than twenty five (25) tons per twelve (12) consecutive month period. This will make 326 IAC 2-2 (PSD) not applicable.

D.1.3 Particulate Emission Limitations [326 IAC 6.5-6-26]

Pursuant to 326 IAC 6.5-6-26 (Particulate Matter Limitations), the Permittee shall comply with the following limitations:

Facility	Particulate Emission Limitation (gr/dscf)	Particulate Emission Limitation (ton/yr)
Phase 3 Baghouse	0.020	55.1
Phase 4 Baghouse	0.02	99.6
Phase 5 Baghouse	0.02	62.0

D.1.4 PSD Minor PM-10 Limitations [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following requirements:

(a) The PM10 emission rates from M4 casting line, identified as EU-F18, controlled by the Phase 5 and 12 baghouses, and a regenerative thermal oxidizer (RTO), shall not exceed 0.5 pounds per ton.

(b) Throughput shall not exceed 25,000 tons of metal poured on EU-F18 per twelve (12) consecutive month period.

(c) At least 90% of the PM10 emissions generated during pouring shall be captured by the Phase 5 Baghouse and controlled such that visible emissions from the pouring process shall not exceed 10% opacity based on a six minute average (24 readings taken in accordance with 40 CFR 60, Appendix A, Method 9).

Compliance with D.1.4(a) and (b), D.2.2(a) & (b) shall limit the net increase of PM-10 emissions from this modification to less than fifteen (15) tons per twelve (12) consecutive month period. This will make 326 IAC 2-2 (PSD) not applicable.

D.1.5 VOC (Volatile Organic Compounds) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following requirements:

(a) The VOC emission rate from M4 casting line, identified as EU-F18, ducted to the Phase 5 and 12 baghouses, and partially controlled by a regenerative thermal oxidizer (RTO), shall not exceed 0.98 pounds per ton.

(b) Throughput shall not exceed 25,000 tons of metal poured on EU-F18 per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with D.1.5 will limit the increase of VOC emissions from this modification to less than 40 tons per twelve consecutive month period. This will make the PSD requirements under 326 IAC 2-2 not applicable.

D.1.6 VOC (Volatile Organic Compounds) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the Permittee shall employ Best Available Control Technology (BACT). BACT for EU-F18 has been determined to be:

(a) Installation and operation of a regenerative thermal oxidizer (RTO) attaining at least 95% control efficiency to control the rollout and mold cooling portions of the process. Rollout

consists of casting removal, mold conveyor and waste mold storage. The Permittee must maintain total enclosure, as defined in EPA Method 204, for the process;

(b) VOC emissions from mold cooling and rollout shall not exceed 0.221 pounds per ton of metal poured; and throughput shall not exceed 60,500 tons of metal poured on EU-F18 per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) BACT for the pouring portion or EU-F18 (M4) is no control. Total VOC emissions from pouring shall not exceed 0.84 pounds per ton of metal poured.

D.1.7 CO (Carbon Monoxide) Limitations [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following requirements:

(a) The CO emission rate from M4 casting line, identified as EU-F18, controlled by the Phase 5 and 12 baghouses, and a regenerative thermal oxidizer (RTO), shall not exceed 3.0 pounds per ton.

(b) Throughput shall not exceed 25,000 tons of metal poured on EU-F18 per twelve (12) consecutive month period.

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for EU-F18, and any control devices.

Compliance Determination Requirements

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.1, D.1.2, D.1.3 and D.1.4, the Permittee shall perform PM, PM-10, VOC and CO testing for the M4 line (EU-F18) utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration (International Truck & Engine Corporation conducted testing on the M4 casting line on April 12, 13, 27 and 28, 2005 for PM, PM10 and VOC and on January 27, 2006 for CO). Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.10 VOC (Volatile Organic Compounds) [326 IAC 8-1-6] [[326 IAC 2-2]

In order to comply with D.1.5(a), D.1.6(a) and D.1.6(b), the RTO for VOC control shall be in operation and controlling emissions from the mold cooling and rollout process at all times that any portion of the mold cooling or rollout process is in operation.

D.1.11 Particulate Matter ten (10) microns in aerodynamic diameter (PM-10)

In order to comply with D.1.4:

(a) Phase 5 Baghouse shall be in operation and controlling emissions from the pouring process at all times when pouring is taking place at EU-F18.

(b) The Phase 12 Baghouse shall be in operation and controlling emissions from the mold cooling process and the rollout room which consists of: casting removal the mold conveyor, and the waste mold storage area at all times when the mold cooling and/or rollout from EU-F18 is taking place.

(c) In the event that bag failure is observed in a multi-compartment baghouse (Phase 5 baghouse), if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify OES of the expected date the failed units will be repaired or replace. The notification shall also include the status of the applicable compliance monitoring

parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.12 Thermal Oxidizer Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. For the purpose of this condition, continuous means at least once per minute. The output of this system shall be recorded as a three hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three hour average temperature of 1400^{o}F.

(b) The Permittee shall determine the three hour average temperature from the most recent valid stack test that demonstrates compliance with limits in condition D.1.6, as approved by IDEM.

(c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three hour average temperature as observed during the compliant stack test.

D.1.13 Parametric Monitoring

The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with limits in condition D.1.3, as approved by IDEM, OAQ, and OES.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.14 Visible Emissions Notations

(a) Visible emission notations of each of the EU-F18 stack exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal for each stack.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.15 Parametric Monitoring

The Permittee shall record the pressure drop once per day across the baghouses used in conjunction with the M4 casting line (EU-F18) while the process line is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and OES and shall be calibrated at least once every six (6) months.

D.1.16 Broken or Failed Bag Detection

(a) For single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emission unit shall be shut down no later than the completion of the processing material in the line (EU-F18). Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.17 Parametric Monitoring

The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.18 Record Keeping Requirements

(a) To document compliance with Conditions D.1.2, D.1.4, D.1.5 and D.1.7 the Permittee shall maintain monthly records complete and sufficient to establish compliance with the PM limits established in Condition D.1.2, PM-10 limits established in Condition D.1.4, VOC limits in D.1.5 and the CO limits established in D.1.7. These records shall include the amount of metal poured each month on EU-F18.

(b) To document compliance with Condition D.1.14, the Permittee shall maintain records of visible emission notations of EU-F18 stack exhausts once per day.

(c) To document compliance with Condition D.1.15, the Permittee shall maintain records of the pressure drop across the baghouses once per day.

(d) To document compliance with Condition D.1.12, the Permittee shall maintain continuous temperature records (reduced to a three hour average basis) for the thermal oxidizer and the three hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(e) To document compliance with Condition D.1.17, the Permittee shall maintain daily records of the duct pressure or fan amperage and the duct pressure or fan amperage recorded during the most recent stack test.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.19 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2, D.1.4, D.1.5 and D.1.7 shall be submitted to OES at the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(b) One (1) production audit dyno engine test area and one (1) engine test area referred to as startability, identified as emissions unit EU-E03D, constructed in 2001, with a maximum capacity of 250,000 engines per year, combusting diesel fuel oil consisting of three (3) diesel fuel-fired dyno engine test stands, each with a nominal fuel consumption rate of 4.3 lbs per six minute test cycle, with a maximum of thirty (30) tests performed per hour, and exhausting through stacks SV-E03D1 through SV-E03D6 and consisting of two (2) diesel fuel-fired engine test run stands, each with a nominal fuel consumption rate of 1.0 lbs per hour per stand, with a maximum of ninety-six (96) tests performed per hour, and exhausting through stack SV-E03D7 to SV-E03D10.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a)(Area Particulate Limitations), particulate matter (PM) emissions from NGDI shall be limited to 0.03 grain per dry standard cubic foot.

D.2.2 PSD Minor PM-10 and PM Limitations [326 IAC 2-2]

Pursuant to 326 IAC 2-2, particulate matter emissions less than ten (10) microns in aerodynamic diameter (PM-10),

(a) PM-10 and PM shall be limited to less than 0.0437 pounds per gallon of diesel fuel used and

(b) 210,000 gallons of diesel fuel input per twelve (12) consecutive month period.

Compliance with D.1.4(a) & (b) and D.2.2(a) & (b) shall limit PM-10 emissions to less than fifteen (15) tons of PM-10 emissions per 12 consecutive month period. Compliance with D.1.2(a), D.1.2(b), D.2.2(a) and D.2.2(b) shall limit PM emissions to less than twenty five (25) tons per twelve (12) consecutive month period. This will make the PSD Regulation 326 IAC 2-2 not applicable.

Compliance Determination Requirements

D.2.3 Particulate Matter ten (10) microns in aerodynamic diameter (PM-10)

Compliance with Condition D.2.2 shall be demonstrated within 30 days of the end of each month based on pounds of PM-10 per gallon of diesel fuel used and the total gallons of fuel used per twelve (12) consecutive month period.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.4 Record Keeping Requirements

(a) To document compliance with Conditions D.2.2 and D.2.4 the Permittee shall maintain monthly records complete and sufficient to establish compliance with the PM-10 limits established in Condition D.2.2.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: International Truck & Engine Corporation
Source Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Mailing Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70 Permit No.: 097-22420-00039

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

Annual Compliance Certification Letter

Test Result (specify)

Report (specify)

Notification (specify)

Affidavit (specify)

Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: International Truck & Engine Corporation
Source Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Mailing Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70 Permit No.: 097-22420-00039

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), and OES within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:

Title / Position:

Date:

Phone:

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE

Part 70 Source Modification Quarterly Report

(Submit Report Quarterly)

Source Name: International Truck & Engine Corporation
Source Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Mailing Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70 Permit No.: 097-22420-00039
Facility: M4 Casting Line EU-F18
Parameter: Tons of Metal Poured on EU-F18 per twelve consecutive month period with compliance determined at the end of each month.
Limit: 25,000 tons of metal poured

QUARTER: _____ YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by:
Title/Position:
Signature:
Date:
Phone:

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE

Part 70 Source Modification Quarterly Report

(Submit Report Quarterly)

Source Name: International Truck & Engine Corporation
Source Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Mailing Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70 Permit No.: 097-22420-00039
Facility: Engine Test Cell NGDI
Parameter: PM-10
Limit: 210,000 gallons of diesel fuel per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: International Truck & Engine Corporation
Source Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Mailing Address: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70 Permit No.: 097-22420-00039

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis
Office of Environmental Services

Addendum to the Technical Support Document for a Significant Source Modification

Source Name:	International Truck and Engine Corporation
Source Location:	5565 Brookville Road, Indianapolis, IN 46219
County:	Marion County
SIC Code:	3519, 3321
Operation Permit No.:	097-22420-00039
Permit Reviewer:	Anh-tuan Nguyen

On August 12, 2006, the Office of Air Quality (OAQ) and the Office of Environmental Services (OES) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that International Truck and Engine Corporation (ITEC), had applied for a Significant Source Modification to request additional restrictive emission limitations for emission unit EU-F18 line based on a recent stack test. The notice also stated that OAQ and OES proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On September 11, 2006, International Truck and Engine Corporation submitted comments on the draft Significant Source Modification. Upon further review, the OAQ and OES have decided to make the following revisions to the Significant Source Modification. The TSD will remain as it originally appeared when published. Changes to the permit or technical support material that occur after the permit has published for public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. Bolded language has been added and the language with strikeout has been deleted. The Table of Contents has been modified to reflect these changes.

A summary of the comments and responses, including changes to the permit, are as follows:

Comment 1:

Condition A.1: General Information (page 4 of 32) – change the Source SIC Code Numbers from '3714, 3321' to '3519, 3321'. The facility consists of a foundry operation, machining operations, diesel engine assembly operations, and engine testing.

Response 1:

The standard industrial classification (SIC) code cited in section A.1 of the permit (22420) corresponds to "manufacturing automotive engines, except diesel." This SIC code has been corrected as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary source, which includes a gray iron foundry operation and engine testing and assembly operations.

…

SIC Code: ~~3714~~ **3519**, 3321

…

Comment 2:

Condition A.2(f) should be revised to more accurately describe the capacity of EU-F11 since the unit can and does receive castings from both the M1 and M3 molding operations. International requests that A.2(f) be revised as follows:

(f) One (1) Casting Vibratory Conveyor and Casting Cooling operation, identified as emission unit EU-F11, constructed in 1977, with a maximum capacity of ninety (90) tons of metal poured per hour (from both the M-1 and M-3 production lines) with emissions controlled by the Phase IV baghouse and exhausting through stacks SV-21A though D
Note: EU-F11 consists of casting punchout controlled associated with M-1 only. Shakers, casting shakeout, and casting cooling are utilized by both the M-1 line and the M-3 line

Response 2:

ITEC will need to submit a Title V application update for potential to emit and applicability review to revise the maximum capacity of the emission unit from 30 tons to 90 tons. The description listed in A.2(f) and D.1 has been changed as follows:

(f) One (1) casting ~~shakeout~~ **vibratory conveyor** and casting cooling operation, identified as emission unit EU-F11, constructed in 1977, consisting of casting punchout, shakers, casting shakeout, and casting cooling, with a maximum capacity of thirty (30) tons of metal poured per hour with emissions controlled by the Phase IV baghouse, and exhausting through stacks SV-21A through SV021D.
Note: ~~M-1 casting cooling and M-3 casting cooling take place on emission unit EU-11 (in the cooling room, also referred to as Casa Diablo). The shakers are also used for both the M-1 line and the M-3 line~~. **EU-F11 consists of casting punchout controlled associated with M-1 only. Shakers, casting shakeout, and casting cooling are utilized by both the M-1 line and the M-3 line.**

Comment 3:

Revise Section B.7(b) to allow for an equivalent certification form as follows:

One (1) certification shall be included, using the attached Certification Form **or the form's equivalent**, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

Response 3:

Permit condition B.7 has been revised as follows:

B.7 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

…

(b) One (1) certification shall be included, using the attached Certification Form **or the form's equivalent**, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

…

Comment 4:

International requests that one permitting authority be the lead agency with regard to notification requirements. Therefore, remove any references to IDEM, OAQ from permit conditions:

B.9 Emergency Provisions
C.7 Asbestos Abatement Projects
C.8 Performance Testing
C.10 Compliance Monitoring
C.11 Instrument Specifications
C.13 Actions Related to Noncompliance Demonstrated by a Stack Test
C.15 General Reporting Requirements
D.1.19 Reporting Requirements

and leave OES as the single permitting authority with regard to notification requirements.

International also requests a more reasonable time frame be provided for submittal of an Emergency Occurrence Report. Two working days often does not allow for the opportunity to sufficiently diagnose a pollution control device failure and formulate a corrective action plan with regard to emergency occurrences. International requests that section B.9(b)(5) be revised as follows:

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

~~Indiana Department of Environmental Management~~
~~Compliance Branch, Office of Air Quality~~
~~100 North Senate Avenue~~
~~Indianapolis, Indiana 46204-2251~~

~~and~~

Indianapolis OES
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

within ~~two (2)~~ **seven (7)** working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

International suggests one grammatical correction and one correction to specify that not all reports may be required to be sent to both IDEM, OAQ and OES in Condition C.15(c): General Reporting Requirements. International request that condition C.15(c) to be change as follows:

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope**,** ~~**or**~~ certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or

before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and**/or** OES on or before the date it is due.

International also suggest one grammatical correction to condition C.11(b), which should be change as follows:

(b) The Permittee may request the ~~IDEM, OAQ, and~~ OES to approve an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement **of** the parameters.

Response 4:

Both IDEM, OAQ and OES have regulatory authority over sources located in Marion County. However, IDEM, OAQ and OES have determined that the quarterly reports and emergency notifications do not have to be submitted to IDEM if they are submitted to OES.

326 IAC 2-7-16(b)(5) states that "The permittee submitted notice either in writing or by facsimile of the emergency under subdivision (4) to the commissioner within two (2) working days of the time when emission limitations were exceeded due to the emergency…." Therefore, the requirement to submit the Emergency Occurrence Report within two (2) working days shall remain unchanged.

The first "or" in condition C.15(c) is correct. It is used to distinguish between two (2) options one of which is in two (2) parts. Since the source is still required to submit some reports to both IDEM, OAQ and OES, the second "or" will not be added because it gives the option of submitting to only one permitting authority.

Permit condition B.9, C.11(b), C.15 and D.1.19 has been changed as follows:

B.9 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified ~~IDEM, OAQ, and~~ OES within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

~~Telephone Number: 1-800-451-6027 (ask for IDEM, OAQ, Compliance Section), or:~~
~~Telephone Number: 317-233-0178 (ask for IDEM, OAQ, Compliance Section)~~

~~Facsimile Number: 317-233-6865;~~

~~and~~

Telephone Number: 317-327-2234 (ask for OES, Air Compliance)
Facsimile Number: 317-327-2274.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

~~Indiana Department of Environmental Management~~
~~Compliance Branch, Office of Air Quality~~
~~100 North Senate Avenue~~
~~Indianapolis, Indiana 46204-2251~~

~~and~~

Indianapolis OES
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, and OES may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify ~~IDEM, OAQ, and~~ OES by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)])]

…

(b) The Permittee may request the IDEM, OAQ, and OES to approve the an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement **of** the parameters.

…

C.15 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

…

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Compliance
2700 South Belmont Ave.
Indianapolis, IN 46221

unless specifically stated otherwise in the D section.

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and OES on or before the date it is due. **For documents submitted to OES only and by any other means, they shall be considered timely if received by OES on or before the date it is due.**

…

D.1.19 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2, D.1.4, D.1.5 and D.1.7 shall be submitted to **OES at** the address~~es~~ listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The

report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Permit condition C.7, C.8, C.10, and C.13 shall remain unchanged.

Comment 5:

Condition B.9(b)(4) and B.9(b)(5) of the source modification includes reporting requirements for emergencies. A third report for emergencies is also requested in condition B.9(h). International feels that submitting three (3) reports is overly burdensome. In addition within the overlying regulation, 326 IAC 2-7-5(3)(C), the regulation specifically states under 326 IAC 2-7-5(3)(C)(ii) that proper notice submittal under 326 IAC 2-7-16 satisfies the reporting requirements of 326 IAC 2-7-5(C)(i). International requests that B.9(h) be stricken from the permit conditions.

Response 5:

Permit condition B.9(h) states "The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report." Emergencies reported by the permittee are considered deviations to the permit and therefore required to be submitted in the Quarterly Deviation and Compliance Monitoring Report. Also, when emergencies are first reported, they are not required to be certified by a "Responsible Official". This certification is done when the emergency is included in the Quarterly Deviation and Compliance Monitoring Report. No changes were made to Condition B.9(h).

Comment 6:

VOC emissions are controlled in part by the RTO, but VOC emissions are only ducted to the Phase 5 and Phase 12 baghouses. International suggests sections D.1.5 be revised to be technically correct as follows:

D.1.5 VOC (Volatile Organic Compounds) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following requirements:

(a) The VOC emission rate from M4 casting line, identified as EU-F18, **ducted to** ~~controlled by~~ the Phase 5 and 12 baghouses, and **partially controlled by** a regenerative thermal oxidizer (RTO), shall not exceed 0.98 pounds per ton.

(b) Throughput shall not exceed 25,000 tons of metal poured on EU-F18 per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with D.1.5 will limit the **net increase** of VOC emissions from this modification to less than 40 tons per twelve consecutive month period. This will make the PSD requirements under 326 IAC 2-2 not applicable.

Response 6:

VOC emissions from the pouring process associated with EU-F18 are ducted through the Phase 5 baghouse and are not controlled by the RTO. VOC emissions from the other processes are ducted to the Phase 12 baghouse and are controlled by the RTO. Therefore VOC emissions from the M-4 casting line are only partially controlled by the RTO. The description suggested by the Permittee reflects how this significant source modification (SSM) was reviewed and drafted. This change to the SSM is descriptive only, and does not impact the potential to emit (PTE). Condition D.1.5 has been changed as follows:

D.1.5 VOC (Volatile Organic Compounds) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following requirements:

(a) The VOC emission rate from M4 casting line, identified as EU-F18, **ducted to** ~~controlled by~~ the Phase 5 and 12 baghouses, and **partially controlled by** a regenerative thermal oxidizer (RTO), shall not exceed 0.98 pounds per ton.

(b) Throughput shall not exceed 25,000 tons of metal poured on EU-F18 per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with D.1.5 will limit the **increase** of VOC emissions from this modification to less than 40 tons per twelve consecutive month period. This will make the PSD requirements under 326 IAC 2-2 not applicable.

Comment 7:

Condition D.1.6 (a) appears to inaccurately specify the portions of the line which are required to meet EPA Method 204 for total enclosure. Condition D.1.6(b) inaccurately states the limitation for the tons of metal poured allowed for EU-F18. It should state that the throughput shall not exceed 25,000 tons of metal poured. International suggests that D.1.6 be rewritten as follows:

D.1.6 VOC (Volatile Organic Compounds) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the Permittee shall employ Best Available Control Technology (BACT). BACT for EU-F18 has been determined to be:

(a) Installation and operation of a regenerative thermal oxidizer (RTO) attaining at least 95% control efficiency to control the **mold cooling, waste mold storage, and** rollout ~~and cooling~~ portions of the process. ~~Rollout consists of casting removal, mold conveyor and waste mold storage.~~ The Permittee must maintain total enclosure, as defined in EPA Method 204, for the rollout**, waste mold storage, and mold cooling** process**es**;

(b) VOC emissions from **mold** cooling, **waste mold storage**, and rollout shall not exceed 0.221 pounds per ton of metal poured; and throughput shall not exceed ~~60,500~~**25,000** tons of metal poured on EU-F18 per twelve (12) consecutive month period with compliance determined at the end of each month.

Response 7:

Condition D.1.6 has been revised such that the cooling process is clearly identified. The description suggested by the Permittee reflects how this significant source modification (SSM) was reviewed and drafted. Mold cooling refers to the portion of the process where the recently poured metal cools and hardens in the core (mold). This is the portion of the process that IDEM, OAQ and OES intended to be controlled. This change to the SSM clarifies for the source in their terms what portion of the process this requirement is applicable to, is descriptive only, and does not impact the potential to emit (PTE). The throughput limit listed in condition D.1.6(b) is a result of a BACT analysis. IDEM, OAQ and OES cannot change the limit unless a new BACT analysis is conducted. Condition D.1.6 has been changed as follows:

D.1.6 VOC (Volatile Organic Compounds) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the Permittee shall employ Best Available Control Technology (BACT). BACT for EU-F18 has been determined to be:

(a) Installation and operation of a regenerative thermal oxidizer (RTO) attaining at least 95% control efficiency to control the rollout and **mold** cooling portions of the process. Rollout consists of casting removal, mold conveyor and waste mold storage. The Permittee must maintain total enclosure, as defined in EPA Method 204, for the rollout process;

(b) VOC emissions from **mold** cooling and rollout shall not exceed 0.221 pounds per ton of metal poured; and throughput shall not exceed 60,500 tons of metal poured on EU-F18 per twelve (12) consecutive month period with compliance determined at the end of each month.

Comment 8:

Condition D.1.8 specifies that a preventive maintenance plan is required for EU-F18, and any control devices. The underlying regulation, 326 IAC 1-6-3, which specifies the requirements for Preventive Maintenance Plans is intended to only be applicable to Emissions Control Devices. EU-F18 is an emissions unit and not an emissions control device. In addition, failure to perform preventive maintenance specific to EU-F18 would not have any direct or indirect impact on the potential to cause an emissions malfunction. International requests condition D.1.8 be revised as follows.

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B**.8** - Preventive Maintenance Plan, of this permit, is required for **the emissions control devices associated with** EU-F18~~, and any control devices~~.

Response 8:

The Preventive Maintenance Plan (PMP) requirement must be included in every applicable Title V permit pursuant to 326 IAC 2-7-5(13). This rule refers to the Preventive Maintenance Plan requirement as described in 326 IAC 1-6-3. This rule sets out the requirements for:

(a) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),

(b) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and

(c) The identification and quantification of the replacement parts for the facility which the Permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(2)).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3(a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. The commissioner may require changes in the maintenance plan to reduce excessive malfunctions in any control device or combustion or process equipment under 326 IAC 1-6-5.

No changes were made to the Condition D.1.8.

Comment 9:

Condition D.1.10 inaccurately specifies the portions of EU-F18 that are required to be controlled by the RTO. International requests that D.1.10 be revised as follows:

D.1.10 VOC (Volatile Organic Compounds) [326 IAC 8-1-6] [[326 IAC 2-2]

In order to comply with D.1.5**(a)**, **D.1.6(a)** and D.1.6**(b)** the RTO for VOC control shall be in operation and controlling emissions from the **mold** cooling, **waste mold storage**, and rollout process at all times that any portion of the **mold** cooling or rollout process is in operation.

Response 9:

Condition D.1.10 has been revised such that the cooling process is clearly identified. Condition D.1.10 has been changed as follows:

D.1.10 VOC (Volatile Organic Compounds) [326 IAC 8-1-6] [[326 IAC 2-2]

In order to comply with D.1.5**(a)**, **D.1.6(a)** and D.1.6**(b)** the RTO for VOC control shall be in operation and controlling emissions from the **mold** cooling, and rollout process at all times that any portion of the **mold** cooling or rollout process is in operation.

Comment 10:

Condition D.1.11(b) should be slightly revised to better describe the portions of the process that are controlled by the phase 12 baghouse. International requests D.1.11(b) be revised as follows:

(b) The Phase 12 Baghouse shall be in operation and controlling emissions from the mold cooling process**, waste mold storage,** and the rollout room ~~which consists of: casting removal, the mold conveyor, and the waste mold storage area~~ at all times when **mold** cooling and/or rollout from EU-F18 is taking place

Response 10:

See Response 7. Condition D.1.11(b) has been changed as follows:

D.1.11 Particulate Matter ten (10) microns in aerodynamic diameter (PM-10)

In order to comply with D.1.4:

(a) Phase 5 Baghouse shall be in operation and controlling emissions from the pouring process at all times when pouring is taking place at EU-F18.

(b) The Phase 12 Baghouse shall be in operation and controlling emissions from the mold cooling process and the rollout room which consists of: casting removal, the mold conveyor, and the waste mold storage area at all times when **mold** cooling and/or rollout from EU-F18 is taking place.

Comment 11:

Condition D.1.16 assumes that only single compartment baghouses control emissions from EU-F18. EU-F18 is controlled by one single compartment baghouse and one multi-compartment baghouse. International request that a section D.1.16(c) be added to the permit language to allow for requirements with regard to broken or failed bag detection on a multi-compartment baghouse as follows:

(c) For multi-compartment units, the affected compartments will be shut down as soon as safely possible and remain shut down until the failed units have been repaired or replaced. The permittee shall take appropriate corrective actions and response steps to return to normal operating conditions as soon as practicable.

Response 11:

IDEM, OAQ and OES agree with the source, however the multi-compartment language will be placed under condition D.1.11. No changes were made to condition D.1.16. Condition D.1.11(c) has been changed as follows:

D.1.11 Particulate Matter ten (10) microns in aerodynamic diameter (PM-10)

In order to comply with D.1.4:

…

(c) In the event that bag failure is observed in a multi-compartment baghouse (Phase 5 baghouse), if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify OES of the expected date the failed units will be repaired or replace. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Comment 12:

The descriptive information in D.2 Facility Description should be revised to accurately describe the NGD1 test cell area. The following description has been submitted and it is International's understanding that the description below is the description intended for the forthcoming Title V permit.

(a) One (1) production audit dyno engine test area and one (1) engine test area referred to as startability, identified as emissions unit EU-E03D, constructed in 2001, with a maximum capacity of 250,000 engines per year, combusting diesel fuel oil consisting of three (3) diesel fuel-fired dyno engine test stands, each with a nominal fuel consumption rate of 4.3 lbs per six minute test cycle, with a maximum of thirty (30) tests performed per hour, and exhausting through stacks SV-E03D1 through SV-E03D6 and consisting of two (2) diesel fuel-fired engine test run stands, each with a nominal fuel consumption rate of 1.0 lbs per hour per stand, with a maximum of ninety-six (96) tests performed per hour, and exhausting through stack SV-E03D7 to SV-E03D10.

Response 12:

The requested change by the source is descriptive only and does not impact the potential to emit (PTE) or applicable requirements. Therefore, the facility description listed in A.2(b) and D.2 has been changed as follows:

(b) ~~one (1) Engine Test Cell, identified as NGDI, with a maximum capacity of 250,000 engines per year, combusting diesel fuel oil and constructed in 2001~~. **One (1) production audit dyno engine test area and one (1) engine test area referred to as startability, identified as emissions unit EU-E03D, constructed in 2001, with a maximum capacity of 250,000 engines per year, combusting diesel fuel oil consisting of three (3) diesel fuel-fired dyno engine test stands, each with a nominal fuel consumption rate of 4.3 lbs per six minute test cycle, with a maximum of thirty (30) tests performed per hour, and exhausting through stacks SV-E03D1 through SV-E03D6 and consisting of two (2) diesel fuel-fired engine test run stands, each with a nominal fuel consumption rate of 1.0 lbs per hour per stand, with a maximum of ninety-six (96) tests performed per hour, and exhausting through stack SV-E03D7 to SV-E03D10.**

Comment 13:

Condition D.2.2 should be revised to accurately state the permit conditions which make PSD Regulation 326 IAC 2-2 not applicable. International request that condition D.2.2 be revised as follows:

> Compliance with D.1.4(a) & (b) and D.2.2(a) & (b) shall limit PM-10 emissions to less than fifteen (15) tons of PM-10 emissions per 12 consecutive month period. Compliance with D.1.2 (a) ~~or~~ **&** (b) and D.2.2(a) ~~and~~ **&** (b) shall limit PM emissions to less than twenty five (25) tons per twelve (12) consecutive month period. This will make the PSD Regulation 326 IAC 2-2 not applicable.

Response 13:

Condition D.2.2 has been changed as follows:

D.2.2 PSD Minor PM-10 and PM Limitations [326 IAC 2-2]

Pursuant to 326 IAC 2-2, particulate matter emissions less than ten (10) microns in aerodynamic diameter (PM-10),

(a) PM-10 and PM shall be limited to less than 0.0437 pounds per gallon of diesel fuel used and

(b) 210,000 gallons of diesel fuel input per twelve (12) consecutive month period.

Compliance with D.1.4(a) & (b) and D.2.2(a) & (b) shall limit PM-10 emissions to less than fifteen (15) tons of PM-10 emissions per 12 consecutive month period. Compliance with D.1.2(a) ~~or~~ **, D.1.2(b)** ~~(b)~~, ~~and~~ D.2.2(a)**,** and **D.2.2(b)** ~~(b)~~ shall limit PM emissions to less than twenty five (25) tons per twelve (12) consecutive month period. This will make the PSD Regulation 326 IAC 2-2 not applicable.

Comment 14:

The emissions unit, an engine test cell, listed in section D.2 has emissions associated with the combustion of diesel fuel during engine test cycles. Failure to perform preventive maintenance specific to NGDI would not have any direct or indirect impact on the potential to cause an emissions malfunction. International believes that condition D.2.3 should be removed from the permit since it serves no purpose with relation to potential environmental impacts associated with NGDI.

Response 14:

IDEM, OAQ and OES agree with the source that a PMP requirement for the engine test cell will not have any direct or indirect impact on the emissions. This is consistent with other permits for engine test cells. Condition D.2.3 has been removed and all subsequent conditions have been renumbered.

~~D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this emission unit.~~

Comment 15:

Form Part 70 Source Modification Report (page 29 of 32)

One minor grammatical correction. Under the parameter section replace ‘determine’ with ‘determined’

Response 15:

The Part 70 Source Modification Report has been changed as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE

Part 70 Source Modification Quarterly Report

(Submit Report Quarterly)

…

Parameter: Tons of Metal Poured on EU-F18 per twelve consecutive month period with compliance ~~determine~~ **determined** at the end of each month.

…

Comment 16:

Quarterly Deviation and Compliance Monitoring Report requirements, pages 9, 15, 23, 24, 29, 30 and 31:

These conditions and the reports require quarterly filing of deviation and compliance monitoring reports. The underlying regulation, 326 IAC 2-7-5(3)(C)(i) requires the submission of monitoring reports no less frequently than semi-annually. International sees no reason to require the submission of reports more frequently than semi-annually as contemplated by the underlying regulation and IDEM has not provided rational why more frequent reporting is necessary. Therefore, these conditions and this report should be revised by deleting the word “Quarterly” and replacing it with the phrase “Semi-annual.”

Response 16:

326 IAC 2-7-5(3)(c)(i) sets out the requirement of reporting required monitoring at least every six months. This report must include an identification of all permit deviations. 326 IAC 2-7-5(3)(c)(ii) sets out a separate requirement for reporting those deviations, including all the information required in each deviation report. OAQ maintains that reporting deviations every six months is not adequate to ensure that the cause of any reoccurring deviation is corrected in a timely fashion. No changes were made.

IDEM and OES Change 1:

326 IAC 9 was approved into the Indiana State Implementation Plan (SIP) on November 30, 2004. The statement “326 IAC 9-1-2 is not federally enforceable” is being removed from the permit. Condition C.3 has been changed as follows:

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. ~~326 IAC 9-1-2 is not federally enforceable.~~

IDEM and OES Change 2:

IDEM and OES are noting that on August 7, 2006, a temporary emergency rule took effect revoking the one-hour ozone standard in Indiana. The Indiana Air Pollution Control Board has approved a permanent rule revision to incorporate this change into 326 IAC 1-4-1. A permanent revision to 326 IAC 1-4-1 will take effect prior to the expiration of the emergency rule.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-2.5	nonattainment
PM-10	attainment
SO_2	maintenance attainment
NO_2	attainment
8-hour Ozone	basic nonattainment
1-hour Ozone	maintenance attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and nitrogen oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(c) Marion County has been classified as attainment or unclassifiable for PM10, SO_2, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Since this source is classified as a “secondary metal production,” it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(e) Fugitive Emissions
This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, therefore fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	greater than 100
PM10	greater than 100
SO_2	greater than 100
VOC	greater than 100
CO	greater than 100
NO_x	greater than 100

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the

twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because VOC and NO_X emissions are each in excess of 100 tons per year. This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because PM2.5 emissions are 100 tons per year or more.

(c) These emissions are based upon calculations generated for the Part 70 Operating Permit.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (tons/year)
Benzene	greater than 10
Cumene	greater than 10
Formaldehyde	greater than 10
Lead	greater than 10
Manganese	greater than 10
Naphthalene	greater than 10
Phenol	greater than 10
Triethylamine	greater than 10
Xylene	greater than 10
All other HAPs	Less than 10 (each HAP)
TOTAL	greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2004 Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) emission data.

Pollutant	Actual Emissions (tons/year)
PM	125.08
PM10	75.88
SO_2	4.64
VOC	136.16
CO	399.24
NO_x	20.83
HAP *(lead)*	0.0022

Description of Proposed Modification

The following table shows the permitting history relating to the M4 casting line (EU-F18), the new engine test cell (NGDI) and the M1 line (EU-F08 through F11):

Permit	Description	Outcome
MSM 097-12752-00039 Issued April 26, 2001	Construction of new M4 casting line and new engine test cell	PM-10 limits placed on M4 casting line and engine test cell. PSD not applicable. Emissions based on theoretical calculations.
SSM 097-18271-00039 Issued on October 8, 2004	M1 line to be phased out, re-evaluate VOC emissions on M4 casting line based on updated emission estimate. Engine test cell still included in permit.	VOC, PM, and PM10 netting analysis was done on M4 casting line, engine test cell, and M1 line. PM, PM10 and VOC limits placed on M1 line during phase out period. PSD not applicable.
SSM 097-22420-00039 Proposed	Remove netting analysis and keep M1 line active. Revise PM, PM10, VOC limits and add CO limits for M4 casting line based on stack test data. Engine test cell still included in permit.	Incorporate new PM, PM10, VOC, CO, and production limits on M4 casting line. Remove PM, PM10 and VOC limits placed on M1 line. PSD not applicable.

Prior to SSM 097-18271-00039, there were no construction or operating requirements associated with the M1 line because construction for the line was in 1956. The only reason limits were placed on the M1 line was for netting purposes. All applicable requirements for the M1 line will be identified in the Part 70 permit.

This modification does not change any conditions relating to the NGDI test cell, which was also included in SSM 097-18271-00039.

This action will replace SSM 097-18271-00039 issued on October 8, 2004 and will be incorporated after the Part 70 Operating Permit is issued. This Significant Source Modification will supersede the previously issued Significant Source Modification 097-18271-00039.

The following is a list of the modified emission unit and pollution control device(s):

(a) One (1) M4 casting line, identified as EU-F18, with a nominal operating capacity of 9 tons of iron poured per hour and 10.75 tons of sand per hour, with pouring emissions controlled by the Phase 5 baghouse, exhausting to stacks SV-23 a, b and c, mold cooling, rollout room and waste mold storage emissions controlled by Phase 12 baghouse and a regenerative thermal oxidizer, exhausting to stack SV-26, and constructed in 2004.[from Significant Source Modification SSM097-18271-00039, issued on October 8, 2004];

(b) One (1) Engine Test Cell, identified as NGDI, with a maximum capacity of 250,000 engines per year, combusting diesel fuel oil, and constructed in 2001. [from Significant Source Modification SSM097-18271-00039, issued on October 8, 2004];

(c) One (1) M1 mold pouring operation, identified as emission unit EU-F08, constructed in 1957, with a maximum capacity of thirty (30) tons of metal poured per hour, with

emissions uncontrolled, and exhausting through stacks SV-18A through SV-18C.

(d) One (1) M1 casting cooling (Fume Tunnel M1) operation, identified as emission unit EU-F09, constructed in 1957, with a maximum capacity of thirty (30) tons of metal poured per hour, with emissions uncontrolled, and exhausting through stacks SV-19A through SV-19D.

(e) One (1) molding operation, identified as emission unit EU-F10, constructed in 1976, consisting of sand coolers (M1 and M3), casting pre-cooling, a storage hopper, and a sand muller (M1), with a maximum capacity of ninety (90) tons of castings per hour and a maximum sand throughput of one hundred fifty (150) tons per hour, with emissions controlled by the Phase III South baghouse and Phase 5 baghouse, and exhausting through stacks SV-20A through SV-20B and SV-23 a, b, and c respectively.
Note: Only the portions of EU-F10 that are related to the M-1 line are affected by this Significant Source Modification. Those portions are: the M-1 sand cooler, M-1 casting pre-cooling, and the M-1 sand muller.

(f) One (1) casting shakeout and casting cooling operation, identified as emission unit EU-F11, constructed in 1977, consisting of casting punchout, shakers, casting shakeout, and casting cooling, with a maximum capacity of thirty (30) tons of metal poured per hour with emissions controlled by the Phase IV baghouse, and exhausting through stacks SV-21A through SV021D.
Note: M-1 casting cooling and M-3 casting cooling take place on emission unit EU-11(in the cooling room, also referred to as Casa Diablo). The shakers are also used for both the M-1 line and the M-3 line.

Enforcement Issues

IDEM and OES are aware that there is a pending enforcement action for the failure to maintain consistent pressure drop records for the baghouses associated with the M4 casting line (emission unit EU-F18) and the M-1 line (emission units EU-F08, EU-F09, EU-F10, EU-F11). IDEM and OES are reviewing this matter and will take the appropriate action.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – PSD or Emission Offset

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/year) at 25,000 tons/yr & control						
Process/Emission Unit	**PM**	**PM10**	**SO_2**	**VOC**	**CO**	**NO_X**	**Single/ Combined HAP**
Pouring, Cooling, & Shakeout (EU-F18)	*6.25	*6.25	0.25	*12.25	*37.5	0.1	-
Fugitive Emissions from the Pouring Process (EU-F18)	5.25	2.58	0.03	0.05	3.25	0.01	-
Engine Test Cells (NGDI)	4.59	4.59	4.29	5.33	1.18	2.66	-
Total for Modification	16.09	13.42	4.57	17.63	41.93	2.80	-

	Potential to Emit (tons/year) at 25,000 tons/yr & control						
Significant Level	25	15	-	40	100	-	-

*Emissions are based on stack test data.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

This modification to an existing major stationary source is not major because the emissions increase is less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Marion County has been designated as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A significant emissions increase would be a net emissions increase or the potential of fifteen (15) tons per year or greater of PM10. International Truck and Engine Corporation has limited the potential to emit of PM10 from the modification to less than fifteen (15) tons per year. Therefore, assuming that PM10 emissions represent PM2.5 emissions, 326 IAC 2-3 does not apply for PM2.5.

Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than twenty-five (25) tons of PM per year, fifteen (15) tons of PM10 per year, forty (40) tons of VOC per year, and one hundred (100) tons CO per year, this source has elected to limit the potential to emit of this modification. ITEC has elected to take a production limit of 25,000 tons per year of metal poured on the M4 line with the following emission limits:

(a) The PM and PM10 emission rates from the M4 casting line, identified as EU-F18, controlled by the Phase 5 and 12 baghouses, and a regenerative thermal oxidizer (RTO), shall not exceed 0.5 pounds per ton.

(b) At least 90% of the PM10 emissions generated during pouring shall be captured by the Phase 5 Baghouse and controlled such that visible emissions from the pouring process shall not exceed 10% opacity based on a six minute average (24 readings taken in accordance with 40 CFR 60, Appendix A, Method 9).

(c) The VOC emission rate from M4 casting line, identified as EU-F18, controlled by the Phase 5 and 12 baghouses, and a regenerative thermal oxidizer (RTO), shall not exceed 0.98 pounds per ton.

(d) The CO emission rate from M4 casting line, identified as EU-F18, controlled by the Phase 5 and 12 baghouses, and a regenerative thermal oxidizer (RTO), shall not exceed 3.0 pounds per ton.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM10 per year, less than forty (40) tons of VOC per year, less than one hundred (100) tons CO per year and therefore will render the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable.

The following table shows actual test results on the M4 casting line as compared to the proposed new emission limits:

Pollutant	Stack test results	Proposed limits

	(lbs/ton)	(lbs/ton)
PM/PM10	0.273	0.5
VOC	0.055	0.98
CO	1.12	3.0

The limits proposed by International Truck and Engine Corporation were to ensure that the PSD, requirements 326 IAC 2-2 and Emission Offset requirements 326 IAC 2-3 were not applicable to this modification. The stack test results demonstrated compliance with the proposed limits.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) The M4 casting line (EU-F18) and the M1 mold pouring operation (EU-F08) is subject to the requirements of 40 CFR Part 63, Subpart EEEEE (National Emission Standards for Hazardous Air Pollutants - Iron and Steel Foundries. A copy of the MACT is available on the U.S. EPA website, http://www.epa.gov/ttn/atw/ifoundry/ifoundrypg.html.

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected emitting units described in this section except when otherwise specified in 40 CFR Part 63, Subpart EEEEE.

This rule has a future compliance date of April 23, 2007; therefore, the specific details of the rule and how the Permittee will demonstrate compliance are not provided in the permit. The Permittee shall submit an application for a significant permit modification no later than 27 months following the effective date of 40 CFR Part 63, Subpart EEEEE, that will specify the option or options for the emission limitations and standards and methods for determining compliance chosen by the Permittee. At that time, IDEM, OAQ will include the specific details of the rule and how the Permittee will demonstrate compliance. In addition, pursuant to 40 CFR Part 63, Subpart EEEEE, the Permittee shall submit:

(1) All the notifications required by 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4), and 40 CFR 63.9(b) through (h) by the dates specified in those sections;

(2) The Initial Notification as required by 40 CFR 63.7750(b); and

(3) The Notification of Compliance Status required by 40 CFR 7750(e).

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 and 2-3 (PSD and Emission Offset)
PSD and Emission Offset applicability is discussed under the Permit Level Determination - PSD and Emission Offset section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the M4 line (EU-F18) will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary

Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 8-1-6 (New Facilities: general reduction requirements)
The potential to emit from the Engine Test Cell (NGDI) is less than 25 tons per year. Therefore, 326 IAC 8-1-6 does not apply to NGDI.

The potential to emit from the casting line, as calculated using the stack test results from Harrison Steel (another chemically bonded mold line located in Indiana), is expected to exceed twenty five (25) tons per year. Therefore, VOC emissions shall be reduced using best available control technology (BACT). BACT for the new casting line (EU-F18) has been determined to be 95% control of rollout VOC emissions by use of an RTO and a production limit of 60,500 tons of metal poured per year. This is equivalent to a limit of 0.221 pounds of VOC from the rollout process per ton of metal poured. The BACT analysis performed for SSM 097-18271-00039 will not be affected by this Significant Source Modification. See Appendix B of SSM 097-22420-00039 TSD for a summary of the BACT analysis.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
On September 1, 2005, 326 IAC 6-1 (Particulate Rules) was repealed as stated in the Indiana Register (28 IR 3454). All non-Lake County PM limitations have been placed into 326 IAC 6.5 (Particulate Matter Limitations Except Lake County). Marion County sources specifically listed in 326 IAC 6-1-12 (Particulate Rules: Marion County) are now listed in 326 IAC 6.5-6 (Marion County).

Sources or facilities located in Marion County which have the potential to emit greater than one hundred (100) tons per year of particulate or that have actual emissions greater than ten (10) tons per year and are not otherwise limited by 326 IAC 6.5-1-2(b) through (g) or 326 IAC 6.5-6 shall not exceed three hundredth (0.03) grains per dry standard cubic foot of exhaust. This source has the potential to emit one hundred (100) tons or more of particulate. Therefore, pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the M4 casting line (EU-F18), the M1 mold pouring operation (EU-F08), the M1 casting cooling operation (EU-F09), and the Engine Test Cell (NGDI) shall each not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

The following facilities are subject to the following limitations pursuant to 326 IAC 6.5-6 (Nonattainment Particulate Emission Limitations: Marion County) because this source and these facilities are specifically listed in 326 IAC 6.5-6-26:

Facility	Particulate Matter Emission Limitation (gr/dscf)	Particulate Emission Limitation (ton/yr)
Phase 3 Baghouse	0.020	55.1
Phase 4 Baghouse	0.02	99.6
Phase 5 Baghouse	0.02	62.0

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal

rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ and OES, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source=s failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to the M4 casting line (EU-F18) are as follows:

(a) In order to demonstrate compliance with the PM, PM-10, VOC, and CO emission rates, the Permittee shall perform PM, PM-10, VOC and CO testing for the M4 line (EU-F18) utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration (International Truck & Engine Corporation conducted testing on the M4 casting line on April 12, 13, 27 and 28, 2005 for PM, PM10 and VOC and on January 27, 2006 for CO). Testing shall be conducted in accordance with Section C- Performance Testing.

(b) In order to comply with VOC emission rate, the RTO for VOC control shall be in operation and controlling emissions from the cooling and rollout process at all times that any portion of the cooling or rollout process is in operation.

(c) The Phase 5 Baghouse shall be in operation and controlling emissions from the pouring process at all times when pouring is taking place. The Phase 12 baghouse shall be in operation and controlling emissions from the cooling process and the rollout room which consists of: casting removal, the mold conveyor, and the waste mold storage area at all times when cooling and/or rollout from EU-F18 is taking place.

(d) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. For the purpose of this condition, continuous means at least once per minute. The output of this system shall be recorded as a three hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three hour average temperature of 1400^{o}F. The Permittee shall determine the three hour average temperature from the most recent valid stack test that demonstrates compliance with the VOC limits, as approved by IDEM. On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three hour average temperature as observed during the compliant stack test

(e) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with the VOC limits, as approved by IDEM, OAQ, and OES.

The pouring/cooling and sand handling from the M4 casting line (EU-F18) have applicable compliance monitoring conditions as specified below:

(a) Once per day visible emissions notations of SV-23 a, b, c and SV-26 stack

exhausts from M4 casting line (EU-F18) shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop once per day across the baghouses used in conjunction with the M4 casting line (EU-F18) while the line is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and OES and shall be calibrated at least once every six (6) months.

(c) For single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(d) For single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emission unit shall be shut down no later than the completion of the processing material in the line (EU-F18). Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(e) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.

The new engine test cell (NGDI) does not have any compliance monitoring conditions.

Conclusion and Recommendation

This Significant Source Modification 097-22420-00039 supercedes the Significant Source Modification 097-18271-00039 issued on October 8, 2004. Any conditions or requirements required by the previous modification (SSM 097-18271-00039) are not being carried over.

The operation of this source shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 097-22420-00039. The staff recommends to the Commissioner that this Part 70 Significant Source Modification be approved.

Indiana Department of Environmental Management
Office of Air Quality
and
Indianapolis Office of Environmental Services

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Description and Location

Source Name:	**International Truck and Engine Corporation**
Source Location:	**5565 Brookville Road, Indianapolis, IN 46219**
County:	**Marion County**
SIC Code:	**3714, 3321**
Significant Source Modification No.:	**097-22420-00039**
Permit Reviewer:	**A. Nguyen**

Existing Approvals

The source submitted an application for a Part 70 Operating Permit on October 24, 1996. At this time, this application is still under review. The source is operating under the following approvals:

(a) Construction permit CP92-0039-02, issued in 1992 for the conversion of boilers to natural gas and distillate fuel oil;

(b) Operating permit 0039, issued on December 17, 1993 for the engine paint booth and the NGD paint booth;

(c) OP-970039, issued on March 11, 1994 for all existing equipment above the permit threshold;

(d) CP-950039-01, issued on May 3, 1995 for the NGD Engine Testing Facility; and

(e) CP-950039-02, issued on June 7, 1995 for sand handling operations controlled by the Phase VIII baghouse;

(f) CP-098-0039-01, issued on June 3, 1998 for construction and operation of two (2) grey iron induction furnaces and one (1) natural gas-fired preheater;

(g) SSM097-11392-00039, issued on December 16, 1999 for the construction of a new core line;

(h) MSM097-12752-00039, issued on April 26, 2001 for the construction of a new M4 casting line and engine test cell, and superseded by SSM097-18271-00039;

(i) MSM097-15003-00039, issued on November 8, 2002 for the construction of two (2) natural gas-fired boilers, and revoked by 097-18919-00039;

(j) SSM097-16709-00039, issued on February 18, 2003 for the construction of one (1) head grinding operation and one (1) block broaching operation;

(k) SSM097-18271-00039, issued on October 8, 2004, for a new M4 casting line and engine test cell; and

(l) Revocation 097-18919-00039 of MSM 097-15003-00039 issued April 27, 2004.

Appendix A: Emission Calculations
Summary

Company Name: International Truck and Engine Corporation
Address City IN Zip: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70: 097-6993-00039
Source Mod.: 097-22420-00039
Revision to Source Mod.: 097-18271-00039
Reviewer: A. Nguyen
Date: April-06

Process	VOC	PM	PM-10	CO	SO2	NOx
Pouring, cooling, and shakeout (EU-F18)	12.25	6.25	6.25	37.5	0.25	0.1
Fugitive emissions from Pouring process (EU-F18)	0.05	5.25	2.58	3.25	0.03	0.0125
NGDI Test Cell	5.33	4.59	4.59	1.18	4.29	2.66
Total	17.63	16.09	13.42	41.93	4.57	2.8

Company Name: International Truck and Engine Corporation
Address City IN Zip: 5565 Brookville Road, Indianapolis, Indiana 46219
Part 70: 097-6993-00039
Source Mod.: 097-22420-00039
Revision to Source Mod.: 097-18271-00039
Reviewer: A. Nguyen
Date: April-06

Process	Metal Poured (tons/yr)	VOC limit (lbs/ton)	VOC emissions (tons/yr)	PM limit (lbs/ton)	PM Emissions (tons/yr)	PM10 limit (lbs/ton)	PM10 emissions (tons/yr)	CO limit (lbs/ton)	CO emissions (tons/yr)	SO2 limit (lbs/ton)	SO2 emissions (tons/yr)	NOx limit (lbs/ton)	NOx emissions (ton/yr)
M4 (pouring, cooling, and rollout)	25000	0.98	12.25	0.5	6.25	0.5	6.25	3.0	37.5	0.02	0.25	0.01	0.125
Pouring, cooling, and shakeout (EU-F18)	25000	0.004	0.05	0.42	5.25	0.206	2.58	0.26	3.25	0.002	0.025	0.001	0.0125

Methodology
Stack testing conducted at the source show that compliance can be achieved with proposed emission limits for PM, PM-10, VOC and CO.
Emissions (tons/yr) = emission limit (lbs/ton) * metal poured (tons/yr) / (2000 lb/ton)
*Pouring is hooded, so capture is expected to be around 90%. Therefore, 10% of the emission limit is considered fugitive.
PM10 and PM emission factors used to determine fugitive emission is from SCC 304003-20 for pouring (Fugitive PM = 4.2 lbs/ton, fugitive PM-10 = 2.06 lbs/ton)
SO2 and NOx emissins factors are from SCC 304003-20.
Fugitive emissions limit (pouring) for PM, PM10, SO2 and NOx (lbs/ton) = emission limit (lbs/ton) * (1 - 0.9)

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Date: April-06

Heat Input Capacity MM Btu/yr	Gallon equivalent Gallon/yr
29610.0	210000.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.29	0.18	0.36	0.08
Potential Emission in tons/yr	4.59	4.59	4.29	2.66	5.33	1.18

	Pollutant						
	Acetaldehyde	Benzene	Formaldehyde	Napthalene	Toluene	Xylene	Propylene
Emission Factor in lb/hp-hr	7.67E-04	9.33E-04	1.18E-03	8.48E-05	4.09E-04	2.85E-04	2.58E-03
Potential Emission in tons/yr	0.01	0.01	0.02	0.00	0.01	0.00	0.04

Methodology

Maximum capacity = 42322.6 MMBtu per year = 300,000 gallons of diesel fuel at 141,000 BTU/gal heat content = 250,000 engines tested per year

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2 and from Navistar Engine Test Cell stack tests
Emission (tons/yr) = [Heat input rate (MMBtu/yr) x Emission Factor (lb/MMBtu)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Appendix B

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATION

Source Background and Description

Source Name:	International Truck and Engine Corporation
Source Location:	5565 Brookville Road, Indianapolis, IN 46219
County:	Marion
SIC Code:	3714, 3321
Significant Source Modification No.:	097-18271-00039
Permit Reviewer:	Amanda Hennessy

Emission Unit EU-F18, the toaster line, has potential VOC emissions greater than 25 tons per year. Therefore, EU-F18 is subject to BACT under 326 IAC 8-1-6.

The Indiana Department of Environmental Management, Office of Air Quality (IDEM, OAQ) and the City of Indianapolis, Office of Environmental Services (OES) conduct the BACT analysis in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below:

(a) Identify all potentially available control options;

(b) Eliminate technically infeasible control options;

(c) Rank remaining control technologies by control effectiveness;

(d) Evaluate the most effective controls and document the results; and

(e) Select BACT.

Also, in accordance with the "Top-Down" Best Available Control Technology Guidance Document outlined in the 1990 draft U.S EPA New Source Review Workshop Manual, BACT analyses take into account the energy, environmental, and economic impacts on the source. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution thereby protecting public health and the environment.

The City of Indianapolis and the Indiana Department of Environmental Management agreed with ITEC's BACT determination for pouring and cooling and for rollout. This appendix summarizes the BACT analysis.

Pouring

Step 1 – Identify Control Options

The following technologies were evaluated to control VOC emissions:

Regenerative Thermal Oxidizer
Catalytic Incinerator
Flare
Carbon Adsorption, adsorption and condensation

Step 2 – Eliminate technically infeasible control options

Regenerative Thermal Oxidizer (RTO) – An RTO would be considered feasible when the inlet VOC concentration is greater than 20 ppm and when the recommended maximum exhaust flow rate (per the OAQPS Cost Manual) is around 50,000 – 60,000 scfm. The expected VOC concentration (based on another source with a somewhat comparable line's stack test results) will likely be in the 20-100 ppm (as propane) range for pouring and cooling. The pouring process requires an open area and a sufficient air flow rate to achieve adequate capture velocities to control PM emissions. The exhaust from pouring will be directed to the Phase 5 Baghouse and will have a minimum flow rate of 41,485.

Since RTO's are feasible for maximum flow rates around 50,000 – 60,000 scfm, to combine all three portions of the process would result in an exhaust flow rate just over 100,000 scfm. Therefore, it is not feasible to install an RTO to control all three portions of the process.

Since RTO's are feasible for maximum flow rates around 50,000 – 60,000 scfm, to combine emissions from the pouring and cooling portions of the process would result in an exhaust flow rate just over 70,000 scfm. Therefore, due to the locations of the exhaust flow and the exhaust flow rate, it is not feasible to install an RTO to control the pouring and cooling portions of the process.

Since RTO's are feasible for maximum flow rates around 50,000 – 60,000 scfm, to combine emissions from the pouring and rollout portions of the process would result in an exhaust flow rate around 70,000 scfm. Therefore, due to the locations of the exhaust flows and the exhaust flow rate, it is not feasible to install an RTO to control the pouring and rollout portions of the process

Catalytic Incinerator – A catalytic incinerator would be considered feasible when the inlet VOC concentration is in the 50 – 10,000 ppm range and when the maximum exhaust flow rate is around 50,000 scfm. The expected VOC concentration will likely be in the 20-100 ppm range for pouring and cooling. However, there is insufficient data regarding the speciation of VOCs to properly evaluate the feasibility of a catalytic incinerator. ITEC is unable to predict the speciation of VOCs in the exhaust flow and, therefore, the effectiveness or the feasibility of this type of control could not be determined.

Flare – Flares require a minimum heat content of around 300 Btu/scf. The heat content of the pouring and cooling exhaust is likely to be in the range from zero to 50 Btu/scf. Therefore, a flare is not a feasible control for VOC emissions from pouring.

Carbon Adsorption, adsorption and condensation – These control technologies require VOC concentrations ranging from 700 – 10,000 ppm for carbon adsorption, 250-10,000 ppm for adsorption (scrubbing), and 5,000 – 10,000 ppm for condensation. The expected VOC concentration will likely be in the 20 – 100 ppm range for pouring and cooling. Due to the lack of knowledge on VOC speciation from this operation, concentrating the exhaust to attain a higher concentration is not feasible. In addition, ITEC suspects that exhaust contaminants would poison the carbon bed. Particulate not captured in the baghouse could also lead to plugging of the medium. Therefore, these technologies are not feasible.

Step 3 - Rank remaining control technologies by control effectiveness

In Step 2 one control option was determined to be feasible: Regenerative Thermal Oxidizer (RTO).

Step 4 - Evaluate the most effective controls and document the results

An economic analysis was done for routing pouring emissions to an RTO and is shown in Table 1. This analysis shows that operating an RTO on pouring would cost $25,375 per ton of VOC controlled and would cost over 1,500,000 to install. A review of other Indiana BACT determinations revealed that no other source has spent this much to control VOCs.
Table 2 demonstrates the results of BACT analysis for other chemically bonded mold lines. Using no control on emissions from pouring is equivalent to previous BACT determinations for similar sources.

Cost Item	Average Cost Factor		Cost ($s)	Basis of Costs
Direct Costs:				
40000 cfm RTO			**$ 1,024,235**	**Vendor Quote**
Instruments/controls	included			EPA Cost Manual Table 2.8
Taxes	0.05		$ 51,212	
Freight	0.05		$ 51,212	EPA Cost Manual Table 2.8
Base Price:			**$ 1,126,659**	
Installation costs, direct:				
Foundations/Supports	0.08		included	EPA Cost Manual Table 2.8
Erection/handling	0.14		included	
Electrical	0.04		included	
Piping	0.02		$ 22,533	
Insulation	0.01		$ 11,267	
Painting	0.01		$ 11,267	
Total Installation Costs:			**$ 45,066**	
TOTAL DIRECT COSTS (Base Price + Installation)=			**$ 1,171,725**	
Installation costs, indirect:				
Engineering/supervision	0.10		$ 112,666	EPA Cost Manual Table 2.8
Construction/field expenses	0.05		$ 56,333	
Construction fee	0.10		$ 112,666	
Start-up	0.02		$ 22,533	
Performance Test			$ 10,000	Engineering Estimate
Contingencies	0.03		$ 33,800	EPA Cost Manual Table 2.8
TOTAL INDIRECT COSTS=			**$ 347,998**	
TOTAL CAPITAL COSTS (Direct + Indirect)=			**$ 1,519,722**	
Direct Operating Costs:		**hours/year**		
Operator ($/HR X HRS/YR)	24	547.5	$ 13,140	EPA guidance - 0.5 hour per shift per device
Supervision(15% of labor)			$ 1,971	EPA Cost Manual
Operating Materials:				
Maintenance Labor	40	547.5	$ 21,900	EPA Guidance (.5 hour/shift/device)
Maitenance Materials (100% of labor)			$ 21,900	
Replacement parts (as required)	5% of equipment costs		$ 51,212	
Utilities:				
Electricity ($/KWHxKWH/yr)	$.036/kw		$ 10,932	EPA Cost Manual page 2-43
Gas ($/$10^3$ft^{3}x 10^3/yr)	$7/ kCF		$ 188,677	EPA Cost Manual
TOTAL DIRECT OPERATING COSTS (A)=			**$ 309,732**	
Indirect operating (fixed) costs:				
Overhead	60% of O & M labor/materials		$ 35,347	EPA Cost Manual
Property Tax	1% of capital costs		$ 15,197	
Insurance	1% of capital costs		$ 15,197	
Administration	2% of capital costs		$ 30,394	
Capital Recovery CRF=	0.136	6% for 10 years	$ 206,682	
TOTAL FIXED COSTS (B)=			**$ 302,818**	
TOTAL ANNUALIZED COSTS (A +B minus C)=			**$ 612,550**	
Uncontrolled Emissions Rate (tons/year)			**25.41**	
Overall Control System Efficiency			95.0%	
Controlled Emissions Rate (tons/year)=			1.27	
VOC Emissions Controlled, tons/year			24.14	
Cost ($/ton)=			**$25,375**	

TABLE 1. Pouring RTO Economic Analysis

Company / Location	Year Issued	Process Description	Emission Limits	Control Required	Comments
Brillion Iron Works Brillion, Wisconsin	1997	Automated Line PUCB Molds	1.3% resin content of the molds 8.0 lb VOC per ton metal for the mold line	No Control	
Harrison Steel Castings Attica, Indiana	2002	Floor Molding Polyurethane no bake molds 17 tph steel	0.14 lb/ton for pouring 1.2 lb/ton for shakeout	No Control	Performance Tests indicate that this source is not in compliance with these limits. (Pouring and cooling: 1.68 lb/ton; and Shakeout: 3.58 lb/ton)
International Truck & Engine Corporation Indianapolis, Indiana	Proposed in this analysis	PUCB mold and core process	Proposed: 0.98 lb/ton for stack emissions from pouring, cooling and rollout	RTO on Cooling and Rollout	

Table 2 - Existing BACT Determinations.

Step 5 – Select BACT

At a cost of $25, 375 per ton of VOC controlled, an RTO is cost prohibitive for this portion of the project.

BACT for the pouring portion of EU-F18 is no control. An emission limit of 0.84 pounds of VOC per ton will be BACT for pouring. Compliance will be determined by a stack test.

This emission limit is based on stack tests from another foundry in Indiana using a similar technology but with a different process setup. The stack test showed uncontrolled emissions of 1.68 pounds of VOC per ton of metal poured from pouring and cooling. Assuming that emissions are split 50/50 between pouring and cooling, uncontrolled emissions from pouring are expected to be around 0.84 pounds of VOC per ton of metal poured.

Cooling

Step 1 – Identify Control Options

The following technologies were evaluated to control VOC emissions from the pouring and cooling processes:

Regenerative Thermal Oxidizer
Catalytic Incinerator
Flare
Carbon Adsorption, adsorption and condensation

Step 2 – Eliminate technically infeasible control options

Regenerative Thermal Oxidizer (RTO) – An RTO would be considered feasible when the inlet VOC concentration is greater than 20 ppm and when the maximum exhaust flow rate is around 50,000 – 60,000 scfm. The expected VOC concentration (based on another source with a somewhat comparable line's stack test results) will likely be in the 20-100 ppm (as propane) range for pouring and cooling. The exhaust from cooling will be directed to a fabric filter and join with emissions from rollout. Therefore, an RTO on cooling is technically feasible.

Catalytic Incinerator – A catalytic incinerator would be considered feasible when the inlet VOC concentration is in the 50 – 10,000 ppm range and when the maximum exhaust flow rate is around 50,000 scfm. The expected VOC concentration will likely be in the 20-100 ppm range for pouring and cooling. However, there is insufficient data regarding the speciation of VOCs to properly evaluate the feasibility of a catalytic incinerator. ITEC is unable to predict the speciation of VOCs in the exhaust flow and, therefore, the effectiveness or the feasibility of this type of control could not be determined.

Flare – Flares require a minimum heat content of around 300 Btu/scf. The heat content of the pouring and cooling exhaust is likely to be in the range from zero to 50 Btu/scf. Therefore, a flare is not a feasible control for VOC emissions from cooling.

Carbon Adsorption, adsorption and condensation – These control technologies require VOC concentrations ranging from 700 – 10,000 ppm for carbon adsorption, 250-10,000 ppm for adsorption (scrubbing), and 5,000 – 10,000 ppm for condensation. The expected VOC concentration will likely be in the 20 – 100 ppm range for pouring and cooling. Due to the lack of knowledge on VOC speciation from this operation, concentrating the exhaust to attain a higher concentration is not feasible. In addition, ITEC suspects that exhaust contaminants would poison the carbon bed. Particulate not captured in the baghouse could also lead to plugging of the medium. Therefore, these technologies are not feasible.

Step 3 - Rank remaining control technologies by control effectiveness

In Step 2 one control option was determined to be feasible: Regenerative Thermal Oxidizer (RTO). ITEC has chosen to enclose the cooling process and route emissions from cooling to an RTO that will also control VOC emissions from the rollout areas.

Step 4 - Evaluate the most effective controls and document the results

Table 2 above demonstrates the results of BACT analysis for other chemically bonded mold lines. Routing emissions from cooling to an RTO and attaining 95% destruction efficiency is more stringent than previous BACT determinations for similar sources.

Step 5 – Select BACT

BACT for cooling will be 95% control by attaining 100% capture and 95% destruction efficiency through the use of the RTO. This is equivalent to an emission limit of 0.221 pounds per ton of VOC per ton of metal poured from cooling and rollout combined. Compliance will be determined by a stack test and through continuous temperature monitoring. Continuous compliance will be monitored by maintaining duct pressure or fan amperage within a range established by a stack test.

Rollout

Step 1 – Identify Control Options

The following technologies were evaluated to control VOC emissions from the rollout process:

Regenerative Thermal Oxidizer
Catalytic Incinerator

Flare
Carbon Adsorption, adsorption and condensation

Step 2 – Eliminate technically infeasible control options

Regenerative Thermal Oxidizer (RTO) – An RTO would be considered feasible when the inlet VOC concentration is greater than 20 ppm and when the maximum exhaust flow rate is around 50,000 – 60,000 scfm. ITEC has indicated that an RTO is technically feasible.

Catalytic Incinerator – A catalytic incinerator would be considered feasible when the inlet VOC concentration is in the 50 – 10,000 ppm range and when the maximum exhaust flow rate is around 50,000 scfm. As with pouring and cooling, there is insufficient data regarding the speciation of VOCs from the rollout to properly evaluate the feasibility of a catalytic incinerator. This is a new technology with little emission data available. ITEC is unable to predict the speciation of VOCs in the exhaust flow and, therefore, the effectiveness or the feasibility of this type of control is not able to be determined. It is unlikely that this type of control would achieve greater levels of control than an RTO, which has already been determined to be feasible for the rollout process.

Flare – Flares require a minimum heat content of around 300 Btu/scf. The heat content of rollout exhaust is likely to be in the range from zero to 50 Btu/scf. Therefore, a flare is not a feasible control for VOC emissions from rollout.

Carbon Adsorption, adsorption and condensation – These control technologies require VOC concentrations ranging from 700 – 10,000 ppm for carbon adsorption, 250-10,000 ppm for adsorption (scrubbing), and 5,000 – 10,000 ppm for condensation. The expected VOC concentration from rollout exhaust will likely be far below these ranges. Due to the lack of knowledge on VOC speciation from this operation, concentrating the exhaust flow to attain the higher concentration is not feasible. In addition, ITEC suspects that exhaust contaminants would poison the carbon bed. Particulate not captured in the baghouse could also lead to plugging of the medium. Therefore, these technologies are not feasible.

Step 3 - Rank remaining control technologies by control effectiveness

In Step 2, one control option was determined to be feasible: Regenerative Thermal Oxidizer (RTO). An RTO on rollout is expected to reduce VOC emissions by 3.4 pounds per ton or 102.9 tons per year (based on a throughput of 60,500 tons of metal poured per twelve consecutive month period).

Step 4 - Evaluate the most effective controls and document the results

ITEC has proposed the RTO as BACT therefore an economic analysis is not necessary. See Table 2 for a comparison with existing BACT determinations.

Step 5 – Select BACT

For the rollout process, BACT is determined to be installation and operation of an RTO. In order to maximize the effectiveness of the RTO, the rollout process area must meet Method 204 Total Enclosure requirements. The RTO must attain 95% control. The overall stack emission limit for cooling and rollout will be 0.221 pounds per ton with a throughput limit of 60,500 tons of metal poured per twelve (12) consecutive month period. Compliance will be determined by a stack test and through continuous temperature monitoring. Continuous compliance will be monitored by maintaining duct pressure or fan amperage within a range established by a stack test.